

SMIRNOV, A.H.

SMIRNOV, A.H.

Some methodological remarks on recording case history in a neurological clinic. Zhur.nevr. i psikh. Supplement: 54-55 '57.
(MIRA 11:1)

1. Iz kliniki nervnykh bolezney (zav. - prof. I.I. Rusetskiy)
Kazanskogo instituta usovershenstvovaniya vrachey imeni V.I. Lenina.
(MEDICAL RECORDS)

RUSETSKIY, I.I.; SMIRNOV, A.N. (Kazan¹)

Training of neuropathologists in institutes for the advanced
training of physicians. Zhur. nevr. i psikh. 61 no.6:805-806 '61.
(MIRA 15:2)

(NEUROLOGY STUDY AND TEACHING)

SMIRNOV, A.N.

Lumbosacral radiculitis with lesions of the superior lumbar roots.
Kaz.med.zhur. no.3:47-48 My-Je '62. (MIRA 15:9)

1. Klinika nervnykh bolezney (zav. - prof. I.I.Rusetskiy) Kazanskogo
gosudarstvennogo instituta dlya usovershenstvovaniya vrachey imeni
V.I.Lenina.

(NERVES, SPINAL—DISEASES)

RATNER, A.Yu.; SMIRNOV, A.N. (Kazan')

Comatose form of acute hemorrhagic meningo-encephalitis with
a favorable result. Kaz.med. zhur. no.3:91-92 My-Je '63.

(MENINGES—DISEASES) (ENCEPHALITIS) (MIRA 16:9)

RATNER, A.Yu.; SMIRNOV, A.N.

Thrombosis of the vessels of the base of the brain in diabetes mellitus. Kaz. med. zhur. no.6:55-58 N-D '63.

(MIRA 17:10)

1. Kafedra nervnykh bolezney (zav. - prof. I.I. Rusetskiy) Kazanskogo gosudarstvennogo instituta dlya usovershenstvovaniya vrachey imeni Lenina.

SMIRNOV, A. N.

Smirnov, A. N. "The histological structure and development of inflammatory
granuloma in epizootic lymphangitis of horses," Trudy Stavrop. S.-kh. in-ta,
Issue 3, 1948, p. 2-16

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)- item 9203
Also in Veterinariya, Vol. 26, No. 7, July 1949 Tab Con

SMIRNOV, A.N.

27685

Leshch prikrinskikh oser sistemy sarysu. Trudy zool.
in-ta (Akad. nauk azerbaydzh. SSR), T. XIII 1949, s.
60-70 --rezyume na azerbaydzh, yaz. ---Bibliogr: 18 nazv.

SO: Knizhnaya Letopis, Vol. 1, 1955

SMIRNOV, A.N.

▲ simple device for shading preparations in electronic microscopy.
Lab.delo 2 no.5:11-14 S-0 '56. (MLRA 9:11)

1. Iz Vsesoyuznogo instituta eksperimental'noy veterinarii, Moskva
(MEDICAL INSTRUMENTS AND APPARATUS)
(ELECTRON MICROSCOPY)

Abstract in Sum.1204, 28 Jan 57

USSR/Diseases of Farm Animals. Noninfectious Diseases. R-2

Abs Jour : Ref Zhur-Biol., No 2, 1958, 2752

Author : Smirnov A. N.

Inst : Stavropol' Agricultural Institute

Title : On the Problem of the Pathogenesis and Classification of Fibrinous Inflammation of the Lungs in Domestic Animals.

Orig Pub : Tr. Stavropol'sk s-kh. in-ta, 1956, vyp. 7, 349-356

Abstract : Pathalogo-Anatomical and histological investigations of pulmonary fibrinous inflammation (FI) established that in single hoofed animals there are two stages in the course of the disease: anterior alveolar and a croup inflammation. A frequent outcome of such inflammation in horses is a resolution followed by complete recovery. The

Card 1/2

SMIRNOV, A.N.; PEDCHENKO, V.I., veterinarnyy vrach

Veterinary science at the International Mobile Exhibition of
Apparatus and Measuring Instruments. Veterinariia 36 no.7:
13-21 J1 '59. (MIRA 12:10)

1. Zaveduyushchiy razdelom zhivotnovodstva i veterinarii Vystavki
dostizheniy narodnogo khozyaystva Moskva, i starshiy nauchnyy
sotrudnik Vsesoyuznogo instituta eksperimental'noy veterinarii
(for Smirnov). 2. Metodist razdela zhivotnovodstva i veterinarii
Vystavki dostizheniy narodnogo khozyaystva, Moskva, i mladshiy
nauchnyy sotrudnik VNIIVVM (for Pedchenko).

(Veterinary instruments and apparatus—Exhibitions)

SMIRNOV, A.N., kand.veterinarnykh nauk

Pathology of the hooves of deer which have survived foot and
mouth disease. Trudy VIEV 26:26-29 '62. (MIRA 16:2)

1. Laboratoriya mikrobiologii i immuniteta Vsesoyuznogo instituta
eksperimental'noy veterinarii.

(Deer—Diseases and pests) (Foot-and-mouth disease)

SMIRNOV, A.N., kandidat biologicheskikh nauk.

Kura River lamprey.^{*} Priroda 41 no.7:111-112 Jl '53.

(MLRA 6:6)

1. Institut zoologii Akademii nauk Azerbaydzhanskoy SSR.

(Kura River--Lampreys)

*eellike aquatic vertebrates

SHIRAZI, A. A.

"Braghinkov Mornings of the Caspian Sea." Dr Biol Sci, Inst of Zoology
Acad Sci Azerbaydzhan SSR, Baku, 1955. (AL, No 12, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations
Defended at USSR Higher Educational Institutions (15)

SMIRNOV, A.N.

Origin and development of races of the shad *Caspialosa Brashnikovi*
(Borod.) in the Caspian Sea and Black Sea. Trudy Karad. biol. sta.
no.14:92-121 '57. (MLRA 10:8)
(Caspian Sea--Shad) (Black Sea--Shad)

SMIRNOV, Anatoliy Nikolayevich, doktor biolog.nauk; KOTOV, Mikhail Ivanovich, doktor biolog.nauk; PUZANOV, Ivan Ivanovich, prof., doktor biolog. nauk; D'YAKONOV, Aleksandr Mikhailovich [deceased]; GRISHCHENKO, Dmitriy Lukich; BRAGINSKIY, L.P., red.izd-va; KRYLOVSKAYA, N.S., tekhn.red.

[Karadag; popular science studies] Karadag; nauchno-populiarnye ocherki. Kiev, Izd-vo Akad.nauk USSR, 1959. 107 p.

(MIRA 13:5)

(Karadag (Crimea)--Physical geography) (Black Sea--Marine fauna)
(Karadag (Crimea)--Marine laboratories)

SMIRNOV, A.N.

Age and growth of some fish species in the Black Sea. Trudy Karad.
biol. sta. no.16:70-85 '60. (MIRA 13:9)
(BLACK SEA--FISHES)

SMIRNOV, A.N.

Feeding habits of young pike perch (*Lucioperca lucioperca* L.) and
bream (*Abramis brama* L.) of the Sea of Azov. Zool. zhur. 41
no.12:1843-1847 D '62. (MIRA 16:3)

1. Azov Research Institute of Fishery Management, Rostov-on-Don.
(Azov, Sea of--Pike perch) (Azov, Sea of--Bream)
(Fishes--Food)

SMIRNOV, A.N.; NAUMOV, V.M.

Biological basis for efficient fisheries in the Taganrog Gulf
of the Sea of Azov. Vop. ikht. 3 no.3:460-471 '63.
(MIRA 16:10)

1. Azovskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva--
As NIIRKh, Rostov-na-Donu.
(Taganrog Gulf--Fisheries)

ACC NR: AR7004299

SOURCE CODE: UR/0271/66/000/011/A005/A005

AUTHOR: Smirnov, A. N.

TITLE: Method for engineering estimation of reliability of an inductive parametron

SOURCE: Ref. zh. Avtomat. telemekh. i vychisl. tekhn., Abs. 11A34

REF SOURCE: Izv. Leningr. elektrotekhn. in-ta, ch. 2, vyp. 56, 1966, 40-44

TOPIC TAGS: parametron, reliability, electronic circuit

ABSTRACT: A spectral method for estimating functional reliability by means of calculating the rate of gradual failures is considered. A formula is supplied for estimating this rate from three operability conditions: the range of detuning of parametron circuit and transient conditions of the circuits. Bibliography of 3 titles. V. R. [Translation of abstract]

SUB CODE: 09, 14

Card 1/1

UDC: 621.318.565

ACC NR: AT5020254

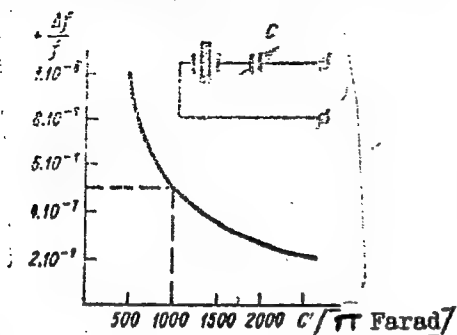


Fig. 1. Graph for the calculation of residual capacity

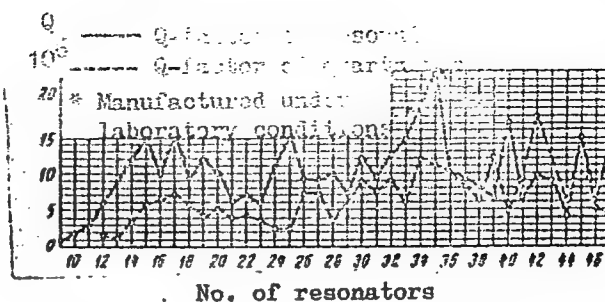


Fig. 2. Correlation between the Q-factors of quartz bars and resonators manufactured in a small-volume plant over a period of one year

Orig. art. has: 1 table, 13 graphs, and 15 equations.

SUB CODE: 09, 11, 14/ SUBM DATE: --Sep62/ ORIG REF: 004/ OTH REF: 004

Card 2/2

RATNER, A.Yu.; SMIRNOV, A.N.

Neurological characteristics of cervical diskogenic myelopathies.
Vop. neirokhir. no.5350-51 '64. (MIRA 18:10)

1. Kafedra nervnykh bolezney (zav. -- prof. I.I.Rusetskiy) Kazan-
skogo instituta usovershenstvovaniya vrachev.

ALENKO, V.M., veter.vrach; KULIKOVA, V.N., veter.vrach; MALAKHOVA, L.S.,
veter.vrach; SMIRNOV, A.N., prof.

Coligranulomatosis in poultry. Veterinariia 41 no.10:33-36
0 '64. (MIRA 18:11)

1. Pyatigorskaya mezhoblastnaya veterinarnaya laboratoriya po
bor'be s boleznymi ptits (for Alenko, Kulikova, Malakhova).
2. Stavropol'skiy sel'skokhozyaystvennyy institut (for
Smirnov).

SMIRNOV, A.P., kand.sel'skokhozyaystvennykh nauk

First successes of poultry raisers on the Kirov Collective Farm.
Ptitsevodstvo 8 no.6:22-23 Je '58. (MIRA 11:6)
(Poultry)

BADER, Otto Nikolayevich; SMIRNOV, Aleksey Petrovich

["Silver from beyond the Kama River" of the first centuries of
our era; Bartym location] "Serebro zakamskoe" pervykh vekov nashei
ery; bartymskoe mestonakhozhdenie. Moskva, Gos.izd-vo kul'turno-
prosv.lit-ry, 1954. 24 p. (MIRA 12:12)
(Silersmithing)

SMIRNOV, A.P., inzh.; SIROTINSKIY, I.B., inzh.

Mechanization of welding operations in railroad car building.
Svar, proizv. no.10:8-12 0 '61. (MIRA 14:9)

1. Rizhskiy vagonostroitel'nyy zavod.
(Railroads--Cars--Welding)

S/120/62/000/003/032/048
E032/E114

AUTHORS: Grigor'yev, A.D., Mikhaylov, Yu.G., Reynov, N.M.,
Rumyantseva, A.V., and Smirnov, A.P.

TITLE: An apparatus for producing films by evaporation in
vacuo

PERIODICAL: Pribery i tekhnika eksperimenta, no.3, 1962, 133-135

TEXT: A description is given of a laboratory apparatus (including a full sectional drawing) for the production of films of metals and dielectrics. It can be used to evaporate five different materials and to obtain (in a single pumping cycle) multi-layer systems consisting of films with ten different configurations in any desired sequence. The thickness of the films is determined in situ from their resistance. Alundum evaporators heated directly by tungsten spirals are employed (maximum temperature 1700 °K, 160 W). The pumping speed (oil diffusion pump) is 250 litres/sec and the working pressure is 5×10^{-6} mm Hg. The targets are cooled by liquid nitrogen. There are 3 figures.

Card 1/2

An apparatus for producing films...

S/120/62/000/003/032/048
E032/E114

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR
(Physicotechnical Institute AS USSR)

SUBMITTED: November 14, 1961

Card 2/2

PAUSHKIN, Ya.M.; VISHNYAKOVA, T.P.; SMIRNOV, A.P.

Exothermic catalytic pyrolysis of unsaturated and aromatic hydrocarbons. Neftekhimiia 1 no.4:514-520 J1-Ag '61.

(MIRA 16:11)

1. Institut neftekhimicheskoy i gazovoy promyshlennosti imeni I.M. Gubkina.

S/065/61/000/012/003/005
E075/E135

AUTHORS: Vishnyakova, T.P., Paushkin, Ya.M., Bondarenko, L.V.,
and Smirnov, A.P.

TITLE: Influence of the chemical composition of hydrocarbon
feedstock and aqueous vapours on the dynamics of
formation of olefines during high temperature pyrolysis

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.12, 1961,
11-14

TEXT: The aim of this work was to study dynamics of
gasification of n-cetane, α -methyldecalin and a middle kerosene
fractions (b.pt.200-300 °C) leading to the formation of ethylene
and propylene. The gasification process was carried out in a
laboratory apparatus, a diagram of which is shown in Fig.1, where:
1 - reactor; 2 - electric furnace; 3 - flow meters; 4 - receiver
for condensate; 5 - water pump; 6 - feedstock pump; 7 - burettes;
8 - receiver for condensate; 9 - condenser; 10 - water washer;
11 - oil washer; 12 - gas meter; 13 - beater for feedstock;
14 - heater for steam; 15 - sprayer. The feedstock was preheated
to 300 °C, sprayed into the reactor with steam preheated to

Card 1/13

Influence of the chemical

S/065/61/000/012/003/005
E075/E135

450-500 °C (feedstock-steam ratio 1:1). The mixture was heated in the reactor to 800 °C, the temperature being controlled electrically. The total material balance and the balance for each section of the reactor are obtained as a function of the place of gas take-off. The time of contact of feedstock in the reaction zone was determined to obtain the speed of gasification of the different types of hydrocarbons along the length of the reactor. For the n-cetane fraction the formation of olefines passes through a maximum and reaches about 40% of the total gas for the reaction times of 0.5 to 0.6 sec. Subsequently the concentration of olefines begins to fall rapidly and for 1.5 - 2.0 sec reaction times it is as low as 5-7%. The extent of gasification after 2 sec reaches 90% of the feedstock but at the time of maximum olefine yield, only 50% of the feedstock is gasified. Gasification of α -methyldecalin fraction gives less olefines and a maximum yield of 24% is reached for the reaction time of 0.6 sec. The kerosene fraction, which consisted mainly of naphthenes and paraffins, gave a maximum yield of 27% after 0.3-0.5 sec. The composition of gases formed during the pyrolysis is different for each hydrocarbon fraction investigated.

Card 2/4₃

Influence of the chemical

S/065/61/000/012/003/005;
E075/E135

There are 4 figures and 1 table.

ASSOCIATION: MINKh and GP imeni I.M. Gubkin

Card 3/4₃

SMIRNOV, A.P., inzh.; EL'KIN, E.Z., inzh.

Increase the effectiveness of metal supports in development workings. Ugol' Ukr. 4 no.4:12-13 Ap '60.

(MIRA 13:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut Podzemshakhtostroy.

(Mine timbering)

SMIRNOV, A.P., brigadir kamenshchikov.

Work organization of a mixed crew of brick layers. Nov.tekh. i
pered.op. v stroi. 18 no.12:21-23 D '56. (MLRA 10:1)
(Bricklaying)

SMIRNOV, A.P., inzhener

Construction of the reinforced concrete bridge across the Rhine
at Worms. Bet. i zhel.-bet. no.7:264-265 0 '55. (MLRA 9:1)
(Rhine River--Bridges, Concrete)

TARGULYAN, Yuriy Oganesovich, kand. tekhn. nauk; CHEKOTILLO, A.M.,
kand. tekhn. nauk, retsenzent; SMIRNOV, A.P., inzh. red.;
CHVANOV, V.G., red. izd-va; GALAKTIONOVA, Ye.N., tekhn. red.

[Artificial structures over streams subject to icing] Iskus-
stvennye sooruzheniia na vodotokakh s naladiami. Moskva,
Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shossei-
nykh dorog RSFSR, 1961. 78 p. (MIRA 14:5)
(Road construction) (Ice on rivers, lakes, etc.)

SMIRNOV, M.I.

KOZHINOV, V.F.; POPKOVICH, G.S.; KARLINSKAYA, M.I.; KUBLANOVSKIY, L.B.,
kandidat tekhnicheskikh nauk, retsenzent; KONYUSHKOV, A.M.,
kandidat tekhnicheskikh nauk, redaktor; SMIRNOV, A.P., redaktor;
PERSON, M.N., tekhnicheskii redaktor.

[Automation in the work of water supply and sewage disposal
installations] Avtomatizatsiia raboty vodoprovodno-kanalizatsion-
nykh sooruzhenii. Moskva, Gos.izd-vo lit-ry po stroitel'stvu i
arkhitekture, 1955. 257 p. (MLRA 9:1)

(Automation--Water-supply engineering)

(Sewage--Purification)

SMIRNOV, Aleksandr Pavlovich[Smyrnov, O.P.]; KOVALENKO, O.I., red.;
CHEREVATSKIY, S.A.[Cherevats'kyi, S.A.], tekhn. red.

[Production and use of fodder yeast] Vyhotovlennia i vykory-
stannia kormovykh drizhdzhiv. Kyiv, Derzhsil'hospvydav URSR,
1962. 23 p. (MIRA 16:5)

(Yeast as feed)

1. SMIRNOV, A. P., Prof., MERIERT, N. Ya.
 2. USSR (600)
 4. Kuybyshev Hydroelectric Power Station - Antiquities
 7. Archaeological expedition to the construction site of the Kuybyshev hydroelectric power station in 1952. Vest. AN SSSR 23, No. 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

SMIRNOV, A.P., professor; MERPERT, N.Ya., kandidat istoricheskikh nauk.

Source: *Pravda* 1954

Archaeological investigations of the Kuybyshev expedition in 1953.
Vest.AN SSSR 24 no.4:59-68 Ap '54. (MLRA 7:5)

(Volga Valley--Archaeology)

(Archaeology--Volga Valley)

BARDIN, I.P., akademik, glavnyy red. [deceased]; KHACHATUROV, T.S., otv. red.toma; SMIRNOV, A.P., zam.otv.red.toma; VERKHOVSKIY, I.A., red. toma; NEKRASOVA, R.I., red.toma; TSENIN, S.S., red.toma; LAVRENT'YEV, M.A., red.; VOL'FKOVICH, S.I., red.; DIKUSHIN, V.I., red.; NEMCHINOV, V.S., red.; VEYTS, V.I., red.; LEVITSKIY, O.D., red.; NEKRASOV, N.N., red.; PUSTOVALOV, L.V., red.; ROSTOVTSSEV, N.F., akademik, red.; POPOV, A.N., red.; GRAFOV, L.Ye., red.; GASHEV, A.D., red.; PROBST, A.Ye., prof., red.; VASYUTIN, V.F., prof., red.; KROTOV, V.A., prof., red.; VASIL'YEV, P.V., doktor ekonom.nauk, red.; LYUDOGOVSKIY, G.I., kand. tekhn.nauk, red.; LETUNOV, P.A., kand.geol.-miner.nauk, red.; SHKOL'NIKOV, M.G., kand.ekon.nauk, red.; RODINA, Ye.D., red.izd-va; GUSEVA, A.P., tekhn.red.

[Transportation; proceedings of the Conference on the Development of Productive Forces of Eastern Siberia] Transport; trudy Konferentsii po razvitiu proizvoditel'nykh sil Vostochnoi Sibiri. Moskva, Izd-vo Akad.nauk SSSR, 1960. 203 p. (MIRA 13:10)

(Continued on next card)

BARDIN, I.P.--(continued) Card 2.

1. Konferentsiya po razvitiyu proizvoditel'nykh sil Vostochnoy Sibiri, 1958. 2. Chleny-korrespondenty AN SSSR (for Khachaturov, Veyts, Levitskiy, Nekrasov, Pustovalov). 3. Vsesoyuznaya akademiya sel'sko-khozyaystvennykh nauk imeni V.I.Lenina (for Rostovtsev). 4. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Popov). 5. Zam.predsdatelya Gosplana RSFSR (for Grafov). 6. Chlen Gosplana RSFSR (for Gashev). 7. Institut kompleksnykh transportnykh problem AN SSSR (for Khachaturov, Verkhovskiy, Nekrasova, TSenin, Smirnov).
(Siberia, Eastern--Transportation)

PANFEROV, V.I. [deceased]; ~~SMIRNOV~~, A.P., otv. red.; DOBSHITS, M.L.,
red. izd-va; YEGOROVA, N.F., tekhn. red.

[Local transportation networks and conditions of their forma-
tion] Mestnaia set' putei soobshcheniia i usloviia ee formiro-
vaniia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 131 p.

(MIRA 15:2)

(Transportation)

MALYGIN, S. A. (Candidate of Veterinary Sciences, Gor'kii Scientific Research Veterinary Station [NIVS], DRUZHKOVA, I. D. (Head Veterinary Doctor of the Naruksov District) and SMIRNOV, A. P. (Senior Veterinary Doctor of the Veterinary Department of the Gor'kii Oblast' Administration of Production and Procurement of Agricultural Products).

"Rabies in cattle."

Veterinariya, vol. 39, no. 9, September 62, p. 22

SMIRNOV, Anatoliy Pavlovich, inzh.; KHODULIN, Boris Nikolayevich, inzh.;
ALEKSANDRINA, V.P., red.; FREGER, D.P., red. izd-va; GVIRTS, V.L.,
tekhn. red.

[Some problems in the technology and properties of high-strength
sand concretes] Nekotorye voprosy tekhnologii i svoistv vysoko-
prochnykh peschanykh betonov. Leningrad, 1962. 23 p. (Leningrad-
skii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom.
Seriia: Stroitel'naia promyshlennost', no.22) (MIRA 16:2)
(Concrete--Testing)

SMIRNOV, A.P.; VOLOGZHANIN, Yu.N.

Traction substations without personnel on duty. Elek. i tepl.tiaga
no.8:18-20 Ag '63. (MIRA 16:9)

1. Nachal'nik Vladimirskogo uchastka energosnabzheniya Gor'kovskoy dorogi (for Smirnov).
2. Starshiy elektromekhanik uchastka po teleupravleniyu Gor'kovskoy dorogi (for Vologzhanin).
(Electric railroads--Substations) (Remote control)

PROCESSING AND PROPERTIES INDEX																									
1ST AND 2ND SECTIONS													3RD AND 4TH SECTIONS												
COMMON ELEMENTS													COMMON TABLETS INDEX												
<p>17</p> <p>The standardization of tobacco by its chemical properties. A. Shmuk and A. P. Smirnov. Vsesoyuznii Inst. Tabachnoi Prom. (Kriksnoder) No. 104, 51-107 (1933). ... A discussion of the relation of quality of tobacco to nicotine content, N14, free alky. or bases and its relation to nicotine content, N no., ether no., resins, carbohydrates, polyphenols, polyphenol no., pectins, org. acids, ash, proteins, other nitrogenous substances, carbohydrate-protein no., reaction, reduction properties of smoke and alky. of smoke. J. S. Joffe</p>																									
ASG-SLA METALLURGICAL LITERATURE CLASSIFICATION																									
1ST AND 2ND SECTIONS													3RD AND 4TH SECTIONS												
COMMON ELEMENTS													COMMON TABLETS INDEX												

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>ca</p> <p>Extraction of inositol from tobacco. A. P. Smirnov. <i>Sborn. Rabot Khim. Tabak, Bull. 123, 76-78 (1936).</i>—Aq. ext. of tobacco is pptd. with $\text{Pb}(\text{OAc})_2$, Pb is removed with H_2S, the filtrate heated with NaOH, cooled, exposed to the atm., treated with concd. aq. Na plumbite, and the pptd. Pb-inositol compd. is decompd. with H_2S. B. C. A.</p>																										<p>17</p>																									
<p>ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

SMIRNOV, A. P. A-3

BC

Determination of Inositol. A. P. SMIRNOV
(Sborn. Rabot Chim. Tabak Bull., 1968, No. 124,
87-108).—The Pb-inositol compound may be used
for the determination of inositol. The error is $\pm 6\%$.
E. P.

ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

15000 15100 15200 15300 15400 15500 15600 15700 15800 15900 16000 16100 16200 16300 16400 16500 16600 16700 16800 16900 17000 17100 17200 17300 17400 17500 17600 17700 17800 17900 18000 18100 18200 18300 18400 18500 18600 18700 18800 18900 19000 19100 19200 19300 19400 19500 19600 19700 19800 19900 20000 20100 20200 20300 20400 20500 20600 20700 20800 20900 21000 21100 21200 21300 21400 21500 21600 21700 21800 21900 22000 22100 22200 22300 22400 22500 22600 22700 22800 22900 23000 23100 23200 23300 23400 23500 23600 23700 23800 23900 24000 24100 24200 24300 24400 24500 24600 24700 24800 24900 25000 25100 25200 25300 25400 25500 25600 25700 25800 25900 26000 26100 26200 26300 26400 26500 26600 26700 26800 26900 27000 27100 27200 27300 27400 27500 27600 27700 27800 27900 28000 28100 28200 28300 28400 28500 28600 28700 28800 28900 29000 29100 29200 29300 29400 29500 29600 29700 29800 29900 30000 30100 30200 30300 30400 30500 30600 30700 30800 30900 31000 31100 31200 31300 31400 31500 31600 31700 31800 31900 32000 32100 32200 32300 32400 32500 32600 32700 32800 32900 33000 33100 33200 33300 33400 33500 33600 33700 33800 33900 34000 34100 34200 34300 34400 34500 34600 34700 34800 34900 35000 35100 35200 35300 35400 35500 35600 35700 35800 35900 36000 36100 36200 36300 36400 36500 36600 36700 36800 36900 37000 37100 37200 37300 37400 37500 37600 37700 37800 37900 38000 38100 38200 38300 38400 38500 38600 38700 38800 38900 39000 39100 39200 39300 39400 39500 39600 39700 39800 39900 40000 40100 40200 40300 40400 40500 40600 40700 40800 40900 41000 41100 41200 41300 41400 41500 41600 41700 41800 41900 42000 42100 42200 42300 42400 42500 42600 42700 42800 42900 43000 43100 43200 43300 43400 43500 43600 43700 43800 43900 44000 44100 44200 44300 44400 44500 44600 44700 44800 44900 45000 45100 45200 45300 45400 45500 45600 45700 45800 45900 46000 46100 46200 46300 46400 46500 46600 46700 46800 46900 47000 47100 47200 47300 47400 47500 47600 47700 47800 47900 48000 48100 48200 48300 48400 48500 48600 48700 48800 48900 49000 49100 49200 49300 49400 49500 49600 49700 49800 49900 50000 50100 50200 50300 50400 50500 50600 50700 50800 50900 51000 51100 51200 51300 51400 51500 51600 51700 51800 51900 52000 52100 52200 52300 52400 52500 52600 52700 52800 52900 53000 53100 53200 53300 53400 53500 53600 53700 53800 53900 54000 54100 54200 54300 54400 54500 54600 54700 54800 54900 55000 55100 55200 55300 55400 55500 55600 55700 55800 55900 56000 56100 56200 56300 56400 56500 56600 56700 56800 56900 57000 57100 57200 57300 57400 57500 57600 57700 57800 57900 58000 58100 58200 58300 58400 58500 58600 58700 58800 58900 59000 59100 59200 59300 59400 59500 59600 59700 59800 59900 60000 60100 60200 60300 60400 60500 60600 60700 60800 60900 61000 61100 61200 61300 61400 61500 61600 61700 61800 61900 62000 62100 62200 62300 62400 62500 62600 62700 62800 62900 63000 63100 63200 63300 63400 63500 63600 63700 63800 63900 64000 64100 64200 64300 64400 64500 64600 64700 64800 64900 65000 65100 65200 65300 65400 65500 65600 65700 65800 65900 66000 66100 66200 66300 66400 66500 66600 66700 66800 66900 67000 67100 67200 67300 67400 67500 67600 67700 67800 67900 68000 68100 68200 68300 68400 68500 68600 68700 68800 68900 69000 69100 69200 69300 69400 69500 69600 69700 69800 69900 70000 70100 70200 70300 70400 70500 70600 70700 70800 70900 71000 71100 71200 71300 71400 71500 71600 71700 71800 71900 72000 72100 72200 72300 72400 72500 72600 72700 72800 72900 73000 73100 73200 73300 73400 73500 73600 73700 73800 73900 74000 74100 74200 74300 74400 74500 74600 74700 74800 74900 75000 75100 75200 75300 75400 75500 75600 75700 75800 75900 76000 76100 76200 76300 76400 76500 76600 76700 76800 76900 77000 77100 77200 77300 77400 77500 77600 77700 77800 77900 78000 78100 78200 78300 78400 78500 78600 78700 78800 78900 79000 79100 79200 79300 79400 79500 79600 79700 79800 79900 80000 80100 80200 80300 80400 80500 80600 8

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>CA</p> <p>The aromatic substances of tobacco smoke. A. P. Smirnov and A. A. Tirotenko. Vsesoyuz. Nauch. - Issledovatel. Inst. Tabach. Makhoroch. Prom. No. 140, 103-8 (1959).--The water-sol. portion of smoke was extd. with ether and the residue steam-distd. and fractionated at several temps. The fractions were incorporated in tobacco and their aromas arbitrarily detd.</p> <p>J. S. Joffe</p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION										COMMON VARIABLE INDEX									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

COMMON ELEMENTS

COMMON VARIANTS NOTE

OPEN MATERIALS INDEX

PROCESS AND PROPERTIES INDEX

1ST AND 2ND ORDERS

100 AND 4TH ORDERS

11-D

CA

The dynamics of the inositol content of the tobacco plant during its growth period. A. P. Smirnov, *Vsesoyuz. Nauch.-Issledovatel. Inst. Tabach. Makhorosh. Prom.* No. 140, 118-33(1939).—The inositol content increases with the growth of the plant up to its tech. maturity, amounting to 1.36% of the abs. dry wt. of the leaves. When allowed to grow to natural maturity the inositol content of the leaves decreases. Practically no inositol is present in tobacco seed.
J. S. Joffe

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

100 AND 4TH ORDERS

11-D

CA

SMIRNOV, A. P.

Tobacco Manufacture and Trade

Introduce objective methods for controlling the production process and the quality of tobacco products. Tabak 13, No. 3, 1952

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

1. SKIRNOV, A. P.: CHENIKOV, V. V.: KUZNETSOVA, A. A.

2. USSR (600)

4. Tobacco - Analysis and Chemistry

7. Effect of tobacco tar on its steeping rate. Tabak 13 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

SMIRNOV, A.P., dotsent; KHOLOSTOV, V.A., inzhener, redaktor.

[Principles of the technology of factory processing of tobacco]
Osnovy tekhnologii fabrichnoi pererabotki; tabachnyi tsakh.
Pod red. V.A.Kholostova. Moskva, Gos. izd-vo Ministerstva legkoi
i pishchevoi promyshl., 1953. 170 p. (MLRA 7:4)
(Tobacco industry)

ASMAEV, Petr Georgiyevich, kandidat sel'skokhozyaystvennykh nauk; SMIRNOV, A.P., kandidat biologicheskikh nauk, retsenzent; IL'IN, G.S., retsenzent; MASHKOVTSSEV, M.F., kandidat tekhnicheskikh nauk, spets-redaktor; PRITYKINA, L.A., redaktor; CHEBYSEVA, Ye.A., tekhnicheskiiy redaktor

[Development of varieties and the fermentation of tobacco] Sortovedenie i fermentatsiya tabaka. Moskva, Pishchepromizdat, 1956. 395 p.
(Tobacco) (MIRA 10:3)

1ST AND 2ND ORDERS																										PROCESSES AND PROPERTIES INDEX																									
COMMON ELEMENTS																										COMMON VARIABLES INDEX																									
<p>4732. COMBUSTION OF BROWN COAL IN FURNACE WITH POWER OPERATED CHAIN GRATE. Smirnov, AP (Za Khon. Topliva (Fuel Khon.), Aug. 1950, 14-17) a record of successful tests of a boiler producing 16-20 tons/hr of steam on brown coal containing 24-29% moisture and 31-45% ash on a dry coal basis. Coal was pre dried to 10-18% moisture by direct contact with flue gases, and combustible material removed with clinker was burned on a subsidiary grate behind the chain grate. (L)</p>																																																			
ASME-ILA METALLURGICAL LITERATURE CLASSIFICATION																										SIGNATURE																									
1ST ORDER																										2ND ORDER																									
1ST ORDER																										2ND ORDER																									

CIA-RDP86-00513R001651510018-3"

SMIRNOV, A. P.

PA 248T87

USSR/Engineering - Fuels, Combustion Dec 52

"Investigation of the Conditions for Ignition of Coals During Combustion in Fuel-Beds," Cand Tech Sci A. P. Smirnov, VNIIT (All-Union Sci-Res Inst of Fuel Utilization)

Iz V-S Teplotekh Inst, No 12, pp 17-21

Investigates 17 grades of coals and peat, whose basic characteristics are given, in exptl furnace which permitted to stage conditions for top or bottom ignition of fuel bed corresponding to operational conditions in industrial stokers. Discusses relationship between time required for ignition of fuels and their basic characteristics, content of volatiles, elemental compn, temp characteristic and rate of burning.

248T87

SMIRNOV, A.P., slesar'; BURUKHIN, M.A., slesar'.

Repairing air preheater tubes. Energetik 1 no.1:11-12 Je '53. (MLRA 6:8)
(Steam boilers)

Smirnov, A.P.

2747. CHAIN GRATE FURNACE WITH WHIT SYSTEM OF BOTTOM IGNITION.
Smirnov, A.P. (Energetik (Irr Ener. Resear), Mar. 1954, 20-32). Combustion
of brown coal was improved by admitting extra-hot air under the front of the
grate to insure ignition at the bottom of the bed. (L).

62

SMIRNOV, A. P.

✓ 3923. INTENSIFICATION OF COMBUSTION OF DAMP SOD PEAT. Smirnov, A.P.
(Elokt. Sta. (Pir Sta., Moscow), June 1956, 12-14). Small scale experiments
on the ignition of peat by a hot air blast from below are recorded. The
principle has been tried out on damp brown coal in boilers and is now suggested

Fuel

1

as an improvement of the Makarev system for the combustion of sod peat in
boilers. The Makarev system comprises a chain grate stoker with the first
third of the grate area taken up by the drying of the peat as it comes down on
to the grate in a shaft. The suggestion is to eliminate the shaft, feed the
peat like coal on to the front edge of the grate, heat 10% of the air for
combustion to 350°C, and introduce it under the front end of the grate. The
peat will then be ignited from below, peat with up to 70% moisture will burn
and peat with 56% moisture will be ignited in the first 300 cm of a grate 7850
mm deep. (L).

Cand Tech Sci

137-58-4-6499

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 24 (USSR)

AUTHOR: Smirnov, A. P.

TITLE: An Investigation of the Operation of Underfeed Stokers on Metallurgical Heating Furnaces (Issledovaniye raboty mekhanicheskikh topok s nizhney podachey v nagrevatel'nykh metallurgicheskikh pechakh)

PERIODICAL: Sb. statey po energetike. Moscow, Metallurgizdat, 1957, pp 52-67

ABSTRACT: In the installation described the fuel is delivered by a worm conveyor from the feed bunker and is forced out at the bottom onto a grate having a retort with air nozzles. Coal that fails to burn completely is broken up on the grate, and burning is then completed by the air delivered to the grate via the nozzles. The stoker (S) was tested on heating and heat-treating furnaces of medium capacity. The use of these S mechanizes the most labor-consuming operation in the burning of solid fuel, namely, the stoking of coal into the S. The results of the operation of an improved design show that a number of clinkering and non-clinkering coals may be burned therein. A change in the grades

Card 1/2

137-1958-2-2303

Smirnov A.P.
Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 13 (USSR)

AUTHOR: Smirnov, A.P.

TITLE: Experience With Floor-Fired Furnaces of VNIIMT Design
(Opyt ekspluatatsii topok s nizhnim vosplameniyem sistemy VNIIMT)

PERIODICAL: Vses. n.-i. in-t metallurg. teplotekhn. Byul. nauchno-tekhn.
inform., 1957, Nr 2, pp 75-84

ABSTRACT: A study was made, on experimental equipment at the VNIIMT laboratory, of the conditions under which various fuels ignite. The experimental equipment used consisted of a cartridge 200 mm in diameter and 300 mm in height mounted on a grill and filled with fuel; preheated air was blown through the fuel from below. Thermocouples were imbedded in a layer 25 mm from the grill. The time elapsing from the moment of filling the cartridge with fuel to the instant the temperature in the layer had increased to where it equalled the temperature of the draft was taken as the ignition time. The various types of fuel tested (in pieces of 5-10 mm grade size at a draft temperature of 350°) were found to have the following ignition times: Lignite 1.5 - 2.0 min; hard coal 2 - 5 min; peat (with a 45-% moisture content) 1.0 min; anthracite (at a 390° draft

Card 1/2

137-1958-2-2303

Experience With Floor-Fired Furnaces

(cont.)

temperature) 12.5 min. Experiments with coke fines revealed that at a draft temperature of 400°, the grade size of the pieces being 5-10 mm, ignition time was 12 minutes. When the temperature was raised to 450°, the ignition time changed, ranging from 2.2 minutes for 0-4 mm pieces to 14.5 minutes for 15-25 mm pieces. The Institute (VNIIMT) has proposed a **floor-fired** system for use in fire chambers with power-driven grates equipped with a zoned air draft. On an SM 16/22 boiler of the Serov Works, which is equipped with a BTsR chain grate, a **floor-fired** system has been in use since 1951; all fire-chamber mechanisms function reliably, and wear and tear on the grate does not exceed the normal. To produce ignition at temperatures up to 300-320°, one-tenth of the air needed for combustion is preheated. The content of combustible materials in the slag amounts to 4-6%, and losses from incomplete combustion comprise 2.0-2.5 %. The speed of the air draft in the bed layer does not materially affect the ignition time. With a rate of heat liberation of 800,000 kcal/m²hr, the combustible-material content of the slag is 6.8%, and combustible-material losses amount to 1%. Converting peat-burning chain-grate shaft burners already in operation to the **floor-fired** system does not involve any structural complications.

G.G.

Card 2/2

1. Furnaces--Operation--Test methods results
2. Furnaces--Operation--Test results

137-58-2-2855

SMIRNOV, A.P.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 93 (USSR)

AUTHOR: Smirnov, A.P.

TITLE: Performance Study of an Automatic Underfeed Stoker for Continuous Soaking Furnaces (Issledovaniye raboty mekhanicheskoy topki s nizhney podachey dlya nagrevatel'nykh metallurgicheskikh pechey)

PERIODICAL: Vses. n.-i. in-t metallurg. teplotekhn. Byul. nauchno-tekh. inform., 1957, Nr 2, pp 85-95

ABSTRACT: A 6-year study of stoker performance was conducted on a continuous sheet-bar soaking furnace. The stokers functioned reliably. The fuel was supplied to the grate automatically; the heating process was easy to regulate and easy to maintain; slaggy coal could be used. Underfeed stokers had an efficiency of up to 96-98 percent; they are recommended for use on soaking furnaces of small and medium output. A schematic drawing of the design is included.

R.B.

1. Furnaces--~~Stoking~~--Automation

Card 1/1

SMIRNOV, A.P.

Burning gas in heating furnaces with pilot lights. Gaz. prom.
no.3:25-29 Mr '58. (MIRA 11:3)
(Furnaces) (Gas as fuel)

SMIRNOV, A.P.

Remodeling large heating furnaces for intermittent operation
on gas. Gaz.prom. 4 no.1:30-32 Ja '59. (MIRA 12:1)
(Furnaces, Heating)

PAUSHKIN, Ya.M.; VISHNYAKOVA, T.P.; SMIRNOV, A.P.; ANAN'YEV, P.G.;
NEPRYAKHINA, A.V.

Recent developments in the cracking of hydrocarbons; cracking
with heat given off and cracking cut off at high temperatures.
Trudy MINKHiGP no.44:118-128 '63. (MIRA.18:5)

MIRNOV, Andrey Petrovich; B.G. GOLDOV, A.I., red.

[Using gas fuel in heating furnaces] Ispol'zovanie gazo-
obraznogo topliva v otopitel'nykh pechakh. Moskva, Stroi-
izdat, 1964. 105 p. (MIRA 17:11)

SMOL'YANINOV, S.I.; STRAMKOVSKAYA, K.K.; SMIRNOV, A.P.; OLITSKIY, I.F.;
KVASHNIN, S.A.

Removal of dust and tar from gases by electrostatic precipitation.
Izv. TPI 126:91-97 '64. (MIRA 18:7)

CHEKALOVSKIY, M.M.; G. LAVIN, G.V.; KREML, N.L.; L. M., I.S.; SMIRNOV, A.P.

Pneumatic charging of coke into the firing hearth of a sintering
furnace. Metallurg 9 no.6:4-5 Jo '64. (MIRA 17:9)

1. Metallurgicheskiy kombinat im. Serova.

PAUSHKIN, Ya.M.; VISHNYAKOVA, T.P.; SMIRNOV, A.P.

Liberation of heat during the extensive decomposition of
hydrocarbons. Khim. i tekhn. topl i masel 9 no.8:5-8 Ag '64.
(MIRA 17:10)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut
neftekhimicheskoy i gazovoy promyshlennosti im. akad. Gubkina.

SMIRNOV, A. P.

"Investigation of the Reversible Annealing Frangibility of Alloyed Structural Steels." Cand Tech Sci, Ural Polytechnic Institute of S. M. Kirov, Min Higher Education USSR, Sverdlovsk, 1954. (KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

SMIRNOV, A. I.

AUTHORS: Lazarev, B. G., Sudovtsov, A. I.,
Smirnov, A. P.

56-4-42/54

TITLE: On the Supraconductivity of Beryllium Foils Which
Condense on a Cold Underlayer (O sverkhprovodimosti
plenok berilliya, skondensirovannykh na kholodnoy
podlozhke). (Letter to the Editor)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4,
pp. 1059-1060 (USSR)

ABSTRACT: Thin beryllium layers are by vaporizing condensed on the
bottom of an evacuateable glass bulb. During the processes
of vaporization and condensation the bottom of the glass
bulb is dipped into liquid helium. The measurement of the
supraconductivity takes place over two electrodes that are
melted into the bottom. The thickness of the layer was
about 10^{-6} cm. When the thickness increased to more than
 10^{-5} cm, the layers came away from the underlayer. Fresh
layers show supraconductive properties already at 4,2°K.
An accurate determination of the transition point was not
yet made, but it is supposed to lie near 8°K.

CARD 1/2

24.5600

67315

~~48 (6)~~

AUTHORS:

Reynov, N.M., Smirnov, A. P.

SOV/181-1.-8-20/32

TITLE:

On the Elastic Limit of Tin²⁷ and Indium¹⁷

PERIODICAL:

Fizika tverdogo tela, 1959, Vol 1, Nr 8, pp 1279 - 1280 (USSR)

ABSTRACT:

During some investigations carried out at temperatures of liquid helium not only new particularities in the behavior of stressed metals but also a considerable influence of temperature lowering upon the processes to be examined has been found. Therefore, a continuation of this work at extremely low temperatures is of interest. Basing on metal elastic limit measurements the possibility of tensile tests at temperatures below 1°K has been explained. The transition from the range of elastic deformation to the range of irreversible deformations was consulted to determine the elastic limit by recording heat liberation at the beginning of nonelastic sample deformation. Preliminary experiments were made with polycrystalline tin samples (residual resistivity: $3 \cdot 10^{-3}$) at 0.1° - 0.3°K. Cooling was brought about by adiabatic demagnetization of a paramagnetic salt into which the cold-conductor (kholodoprovod) was pressed together with the sample soldered to it. The temperature

Card 1/2

On the Elastic Limit of Tin and Indium

67315

SOV/181-1 -8-20/32

of the sample was determined from magnetic susceptibility. With a stress of 1.8 kg/mm^2 upon tin and of 0.24 kg/mm^2 upon indium the samples lost superconductivity. With these stresses a nonelastic deformation probably has already been present in the samples so that the elastic limit does not exceed the above values. The authors do not have any information on publications concerning measurement of the elastic limit of tin and indium by way of low-temperature stretching. Experiments with single crystals at still lower temperatures will permit the recording of smaller heat quantities liberated during deformation and also a more accurate determination of the elastic limit. The authors thank A. V. Stepanov and V. I. Khotkevich for the discussion of the present paper. There are 1 figure and 4 references, 3 of which are Soviet.

ASSOCIATION: Fiziko-tekhicheskiy institut AN SSSR, Leningrad (Institute of Physics and Technology of the AS USSR, Leningrad)

SUBMITTED: July 30, 1958

Card 2/2

AUTHORS: Lazarev, B.G., Sulovtsov, A.I. and Smirnov, A.P. SOV/126-7-1-17/28

TITLE: Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition (O plasticheskoy deformatsii zheleza pri fazovom $\gamma \rightarrow \alpha$ perekhode)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 7, Nr 1, pp 122-127 (USSR)

ABSTRACT: In a number of papers (Refs.1-4) irreversible changes were detected in the sizes of iron specimens whilst passing through the $\alpha \rightarrow \gamma$ transition temperature range. Lately a paper (Ref.5) has appeared which deals with this particular phenomenon. The authors of the present paper give a few results of their investigation of the residual deformation of iron during transition through the phase change. This phenomenon has been detected dilatometrically. The experiments were carried out with Armco iron, and a few experiments with pure iron (made by the firm Hilger). All measurements were carried out in a vacuum of 10^{-6} - 10^{-7} mm Hg. The basic measurements were carried out by means of a simple dilatometer placed in a vacuum (see Fig.1). In

SOV/126-7-1-17/28

Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition

order to check the accuracy of the instruments, dilatometric curves (Fig.2) were plotted at low heating and cooling rates. On plotting the curves under conditions of slow heating and cooling, residual changes in the length of the specimens are not observed. However, a residual change does appear if the experiment is carried out fairly rapidly. It was essential to find which stage of the temperature change is responsible for the phenomenon, heating or cooling. The dilatometric curves in Figs.3 and 4, obtained for a suspended specimen, furnished the answer to this. Both curves were taken on heating (plain circles) and on cooling (points) in the temperature range 800-1000°C. If heating is carried out at any speed and cooling is slow (less than 50°C per minute), the dilatometric curve is reversible (see Fig.3) and no unusual effect appears. Only at a certain cooling rate does the residual elongation of the specimen begin to show (Fig.4). Hence the effect investigated appears in the cooling stage. It is completely absent if the cooling range does not include the transition range

Card 2/5 of one modification to the other. The effect is repeated

SOV/126-7-1-17/28
Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition

at each cycle and the overall elongation increases linearly with the number of cycles. Various curves (a, b, c, d, e) in Fig. 5 have been plotted for various cooling rates (80, 90, 110, 130, 160 and 250°C per minute, respectively). The effect strongly depends on the cooling rate: the angle of inclination of the curves increases with increase in cooling rate. From this curve it can be seen that the effect appears at a cooling rate exceeding 50°C per minute, and increases to saturation. It is possible to assume that it is the difference in the sign of the heat of transformation, and hence the difference in plasticity of the interphase layer, which brings about the difference in deformation of the metal on heating and cooling; i.e. its irreversible dimensional change. This deduction was confirmed by the following experiment. Armco iron plates, 0.1 mm thick, 10 mm wide and 100 mm long were fixed horizontally in groups, and heated in a high vacuum by electric current in such a manner that their centres were in a temperature range exceeding 950°C (i.e. the γ -phase), whilst the ends Card 3/5 exhibited a temperature gradient, so that the γ - and

SOV/126-7-1-17/28
Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition

α phases were both present, being divided by a boundary line. The boundary was perpendicular to the plate, and a change in current passed through the specimen caused it to be displaced along the specimen (the zone denoted by a dotted line in Fig.7). As a result of numerous current modulations the plate became shorter and at the same time its width increased in those portions at which the boundaries were displaced. The results of tests with a specimen undergoing compression by its own weight, instead of elongation, gave an effect which was opposite in sign but the same in absolute magnitude. Fig.8 illustrates the behaviour of the suspended specimen (upper curve) and a supported specimen (lower curve). Both curves of this figure were obtained at the same cooling rate, which was 90°C per minute. It appears that the fundamental reasons for this phenomenon are to be found in the volume change and in the heat given out during phase transformation. The actual effect depends very strongly on the experimental conditions, i.e. on the shape of the specimens and the

Card 4/5 conditions of temperature change.

Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition

SOV/126-7-1-17/28

There are 8 figures and 9 references, of which 4 are Soviet,
2 English, and 3 French.

ASSOCIATION: Fiziko-Tekhnicheskiy institut AN USSR (Physico-Technical
Institute, Ac. Sc. Ukr.SSR)

SUBMITTED: December 6, 1957

Card 5/5

24(0)
AUTHOR: Chantsov, R.
TITLE: The Fifth All-Union Conference on the Physics of Low Temperatures (5-ye Vsesoyuznoye soveshchaniye po fizike nizkikh temperatur)
PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol. 67, Nr. 4, pp 743-750 (USSR)

ABSTRACT:

This Conference took place from October 27 to November 1 at Tallin. It was organized by the Odeskenskiy fiziko-matematicheskiy institut (Department of Physics and Mathematics of the Academy of Sciences, USSR), the Akademicheskaya SSSR (Academy of Sciences, USSR), Gruzinskaya SSSR, and the Tallinskaya gosudarstvennaya universitet (Tallin State University named Stalin).

The Conference was attended by about 300 scientists from Tallin, Moscow, Khar'kov, Kiev, Leningrad, St. Petersburg and other cities as well as by a number of young Chinese scientists who are present working in the USSR. About 50 lectures were delivered which were divided according to research fields.

One of the most interesting lectures delivered at this Conference was that by K. A. Gindin, B. G. Lazarev, Ya. D. Shadrachov and V. I. Zhukovitch (ZhETI) on the polymorphism of metals at low temperatures; P. L. Kapitza commented on this topic during the discussion; F. E. Bulitova, V. S. Korzun and Ye. A. Gerasimov (ZhETI) investigated the system hydrogen-deuterium by the method of neutron diffraction spectroscopy, thermal analysis, and the visual observation of crystal growth; Mr. I. Zaslavskanov, Sh. Kh. Makhmurova and R. I. Bashiriyev have given the thermomagnetic properties of compounds of the type Al_2V_6 , Al_2V_8 and Al_2V_{10} and dealt with the phenomenon of the "photon wind" predicted by Gurvitch; the investigation was carried out at the Baginskii filial AS USSR (Baginskii Branch, AS USSR); Mr. N. Boykov and A. A. Solovov (LPI - Leningrad Physico-Mathematical Institute) gave a report on the measurement of the electrically limit of the conductivity of polycrystalline alkali halides at low temperatures (10°K); and V. K. Popov (LPI) spoke about attempts made to find the expected diamagnetism resonance on polarons in cuprous oxide. G. G. Kuznetsov (ZIN I Institut fiziki AN Gruzinskoi SSR - Tbilisi State University and Institute of Physics AS Gruzinskaya SSR) carried out a theoretical investigation of the Overhauser effect in non-metallic Lomaxide investigated the electron- and nuclear (proton)-resonance in dihydroxyethyl hydrazide at helium temperature. E. H. Bogdanov spoke about gamma-ray irradiation carried out in the laboratory of the Academy of Sciences of the USSR (in iron) at extremely low temperatures; Yu. I. Zhuravskiy and Ye. P. Goroz (LPI) investigated the absorption (μ_{max}) of a cuprous oxide crystal in the magnetic field at helium temperature and observed the effect of magneto-optical oscillations. V. P. Pavlov and M. P. Malkov gave information concerning scientific work of Soviet scientists in foreign countries (Sovetskikh nauchnykh issledovaniy v inostranykh sotsialisticheskikh gosudarstvah), and Z. V. Zhuravskiy spoke about the abstracting journal "Fizika". The Board of the conference proposed that the problems of the physics of low temperatures, hydrodynamics, quantum electronics, and the physics of the Academy of Sciences, Gruzinskaya SSR and the President of the Republic of Georgia, Mr. I. K. Muskhelishvili closed the Conference. The Union Conference on the Physics of Low Temperatures will be held in June and July 1955 in the city of Tverdoklav.

Card 10/11

69092

S/120/60/000/01/039/051

E032/E314

24.5600

AUTHORS: Reynov, N.M. and Smirnov, A.P.

TITLE: Determination of the Elastic Limit of Metals at Ultra-low Temperatures

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, Nr 1, pp 128 - 130 (USSR)

ABSTRACT: The temperatures involved are less than 1 °K. Figure 1 shows a schematic drawing of the apparatus employed to determine the elastic limit of superconducting metals by a thermal method. The very low temperatures (down to 0.05 °K) were obtained by adiabatic demagnetisation of a paramagnetic salt (Ref 4). The specimen (21) of the metal under investigation was in the form of a wire 0.1 - 0.4 mm in diameter and 5-10 mm long. One end of the wire was attached to a silver rod (20) pressed into a block of the paramagnetic salt (10). In order to reduce the supply of heat to the working block a similar buffer block (8) was placed as shown in Figure 1. The lower end of the specimen was attached to the silver extension arm (16) which in its turn was attached to the iron core (24) of the electromagnet. To prevent the

Card1/3

69092

S/120/60/000/01/039/051

E032/E314

Determination of the Elastic Limit of Metals at Ultralow Temperatures

heating of the specimen by light, special diaphragms (1) were inserted and the specimen was screened by the glass tube (22) covered with silver paste which was in contact with the working block (10). The electromagnet can produce stresses of up to 100 g. The specimen was surrounded by the solenoid (13) which produced an axial magnetic field of 350 Oe at 0.5 A. The electrical resistance was measured by the induction method described by Samoylov in Ref 5 with the aid of the three coils (15), (23), having a large number of turns and the two coils (14) made of a super-conducting wire and directly connected with the specimen. The elastic limit was determined as follows. As soon as the lowest temperature due to the demagnetisation of the salt was reached, a preliminary determination was made of the rate of heating of the working block of salt due to the natural leak of heat. Next, a determination was made of the critical magnetic field for which the specimen goes over from superconducting to the normal state as a function of temperature. The magnetic field of

Card2/3

4

69092

S/120/60/000/01/039/051

E032/E314

Determination of the Elastic Limit of Metals at Ultralow Temperatures

the solenoid is adjusted so that heating of the specimen through 0.1 - 0.2 K from the starting temperatures causes its transition from the superconducting to the normal state. The stress is then applied to the specimen with the aid of the electromagnet and the natural heating of the specimen during the extension should be less than 0.1 K. When the resistance of the specimen appears, the load on it is noted and this determines its thermal elastic limit. It was found that the minimum value of the elastic limit of monocrystalline specimens of tin is 200 g/mm². There are 2 figures and 8 references, 4 of which are Soviet, 2 German and 2 English.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physico-engineering Institute of the Ac.Sc., USSR)

SUBMITTED: October 10, 1958

Card 3/3

25180

S/056/61/040/006/001/031

B'02/B2'4

24 7700

AUTHORS: Kolchin, A. M., Mikhaylov, Yu. G., Reynov, N. M.,
Ramyantseva, A. V., Smirnov, A. P., Totubalin, V. N.

TITLE: Investigation of the destruction of superconductivity in
thin tin films

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40,
no. 6, 1961. 1543 - 1550

TEXT: The possibilities of practically applying superconduction effects
(cf. Proc. IRE, 48, 1233 and 1395, 1960) make it of interest to study the
destruction of the superconductivity of thin metal films as caused by cur-
rent. Subject to this work was to elucidate the regularities of the destruc-
tion of superconductivity by a magnetic field or a current, as well as to
describe the laws governing the return of the film to the superconducting
state on removal of the field (current) in a larger temperature interval.
The investigations were limited to films of thicknesses $(1 - 8) \cdot 10^{-3}$ cm
under the action of current pulses of different shapes and lengths and at
temperatures near the critical one. The results of the measurements have

Card 1/1

25180

S/056/61/040/006/001/031

B'02/B2'4

Investigation of . . .

been presented earlier to the Seventh All - Union Conference on Low Temperature Physics in Kharkov (June 1960). The films were prepared by vacuum sputtering (10^{-6} mm Hg). Fig. 1 shows the appearance of such a sample with the current and voltage contacts. The backing was glass or mica, chemically purified and heated in vacuo. The film thickness was determined by weighing; the breadths of the films were 0.10 - 0.25 mm. The resistances of the films amounted to $30 \cdot 130$ ohms at room temperature. Direct current experiments were done with a potentiometer circuit with galvanometer or rheochord with automatic recording of current and voltage by recording potentiometers of the types ЭПН-09М (EPP-09M) and ЭПН-1М (EPP-1M). The transition of the sample to (from) the superconducting state was established by an oscillographic apparatus (use of an oscillograph of the type ЭНО-1 (ENO-1)) which allows to observe and photograph the volt-ampere characteristics. Generators of the types ГИ-2 (GIS-2) and ГИ-3М (GI-3M) were used to study the destruction of superconductivity by pulsed current (duration of the pulse 0.1 - 10 sec). The current and voltage were recorded simultaneously by a double-ray oscilloscope of the type ДЭО-1 (DESO-1). In direct current operation at 4.2°K, films of resistance of 1 - 6 ohms and resistivity 0.4 - 1 μohm/cm were investigated.

Card 2/5

25180

S/056/61/040/006/001/031

B102/B214

Investigation of ...

The critical temperature of these films for a measuring current of 40 μ a lay between 3.75 and 3.85°K and was therefore higher than for massive tin. The experiments showed that with increasing current the resistance increased first very slowly, and for currents over 10 ma. more rapidly. The transition of the sample from the superconducting to the normal state on increasing current was investigated by taking measurements with triangular pulses. The influence of thermal effects on the transition could also be studied in this way. It was found that the sample was heated even by a rise and fall in the pulse of 0.1 μ sec each. This heating is attributed to the appearance of a hysteresis on transition from normal to the superconducting state. Fig. 8 shows a volt - ampere characteristic (pulse growth 0.5 μ sec, fall 0.1 μ sec, sequence 50 cps, $I_{max} = 150$ ma). Further measurements were made by rectangular pulses of 0.1 μ sec (front 0.05 - 0.15 μ sec). Fig. 10 shows an oscillogram of the transitions of a sample from the superconducting to the normal state for a pulse length of 2 μ sec (upper curve: current, lower: voltage). The following results were obtained from the studies: The regularities found hold for films of such thicknesses for which the current destroying the superconductivity depends only slightly on the thickness.

Card 3/5

Investigation of ...

25180

S/056/61/040/006/001/031

B102/B214

For thinner samples, other regularities are to be expected. Under the action of very short pulses the transition is greatly affected by Joulean heat and heat caused by Foucault currents. Besides the hysteresis of thermal effects on transition from the normal state to the superconducting state, there is also observed a hysteresis which is attributed to the existence of superconducting domains in the normal phase. The duration of the spontaneous transition to the superconducting state is considerably smaller than that of the destruction of the intermediate state arising when the superconducting state is destroyed by current. The duration of transition from the superconducting to the normal state depends on the amplitude of the current in the pulse. For sufficiently large amplitudes, the transition time is $< 5 \cdot 10^{-9}$ sec. A. A. Galkin is mentioned. There are 12 figures and 10 references: 4 Soviet-bloc and 6 non-Soviet-bloc. The most important references to English-language publications read as follows: J. W. Bremer, V. L. Newhouse. Phys. Rev. 116, 309, 1959 and Phys. Rev. Lett. 1, 282, 1958; C. R. Smallman et al. Proc. IRE, 48, 1562, 1960.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskii institut Akademii nauk SSSR
(Leningrad Institute of Physics and Technology of the Academy
of Sciences, USSR)

Card 4/5

KOLOMYS, N.Ye., inzh.; SMIRNOV, A.P., inzh.; TREGUB, V.T., inzh.

Experience in using heat shields in 150 M. blocks. Elek.
sta. 35 no.3:8-12 Mr '64. (MIRA 17:6)

L 16381-65 EWT(m)/EPF(c)/EPR/EWP(j) Pc-l/Pr-l/Ps-l/Pi-l RPL WW/JW/RM
ACCESSION NR: AP4043278 S/0065/64/000/008/0005/0008

AUTHOR: Paushkin, Ya. M.; Vishnyakova, T. P.; Smirnov, A. P.

TITLE: Evolution of heat on intensive dissociation of hydrocarbons

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1964, 5-8

TOPIC TAGS: hydrocarbon dissociation, aliphatic hydrocarbon, olefinic hydrocarbon, aromatic hydrocarbon, dissociation reaction, conversion

ABSTRACT: The heat effects in the dissociation of a variety of hydrocarbons to CH_4 and C, and H_2 and C were investigated. Values for the heat effects for these dissociations were calculated for several aliphatic olefinic, and aromatic hydrocarbons; the calculated thermodynamic potentials, at 25C, confirmed the possibility of the dissociation reactions. These compounds were subjected to a fluidized bed cracking process in the presence of a nickel catalyst at 300-650C to form C, H_2 , CH_4 and traces of gaseous olefins. All the hydrocarbons were cracked; the conversion of the unsaturated compounds was the highest (and their thermal effect

Card 1/2

L 16381-65

ACCESSION NR: AP4043278

2

was the highest). Increasing the reaction temperature caused a decrease in the CH_4 and an increase in the H_2 content in the conversion products, and lowered the heat effect. It was concluded CH_4 was formed first, and the H_2 formation was due to the breakdown of CH_4 . In the 500-600C range the heat effect decreased due to CH_4 dissociation. The reaction for paraffinics is exothermic only if the reaction proceeded to CH_4 and C (400-450C), at higher temperatures the reaction is endothermic. The conventional cracking process, which results in the formation of a complex mixture of hydrocarbons, is an endothermic reaction. The heat effect of cracking dienes, aromatic and olefinic hydrocarbons compares and in some cases exceeds, the heat of combustion and detonation processes. Orig. art. has: 1 figures and 3 tables.

ASSOCIATION: MINKh and GP

SUBMITTED: 00

ENCL: 00

SUB CODE: GC, TD

NO REF SOV: 001

OTHER: 000

Card 2/2

L 8890-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWP(q)/EWP(b)
 PC-4/Pr-4/PS-4/Pt-10/Pu-4 AFWL/ASD(a)-5/ESD(t)/ESD(dp)/RAEM(t) JD/
 JG/AT/RM/WH

ACCESSION NR: AP4045016

S/0191/64/000/009/0003/0005

AUTHOR: Paushkin, Ya. M.; Bocharov, B. V.; Smirnov, A. P.;
 Vishnyakova, T. P.; Machus, P. P.; Panidi, I. S.

TITLE: Preparation of polyvinylene compounds by the reaction of
 calcium carbide with carbonyl compounds

SOURCE: Plasticheskiye massy*, no. 9, 1964, 3-5

TOPIC TAGS: organic semiconductor, semiconducting polymer, poly-
 vinylene, carbonyl compound, calcium carbide

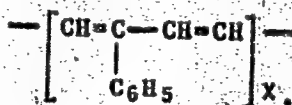
ABSTRACT: A new route has been found for the preparation of conju-
 gated polymers; the reaction of carbonyl compounds with calcium
 carbide. In addition to its simplicity, an advantage of this
 method is that one of the reactants is carbide dust, a waste pro-
 duct of calcium carbide production. The method is based upon the
 principle that calcium carbide removes water from carbonyl compounds,
 and is thereby hydrolyzed and liberates acetylene; acetylene can
 then react with the carbonyl compounds or intermediates to form

Card 1/3

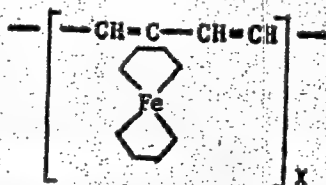
L 8890-65

ACCESSION NR: AP4045016

conjugated polymers. The carbonyl compounds—acetone, acetophenone, acetaldehyde, and acetylferrocene—reacted with calcium carbide in molar ratios of 1/0.5 to 1/1 at 150—200C. The polymers produced were only partly soluble in organic solvents. The soluble fraction, whose yield was 13.3—38%, was studied by cryoscopic molecular weight determination and by elemental analysis. All of the polymers were also studied by EPR and IR spectroscopy. The polymer structures were assumed to be of the type



A polymer of the type



Card 2/3

L 8890-65

ACCESSION NR: AP4045016

was synthesized for the first time. Most of the soluble polymers were black or orange powders, except for the polymer from acetone, which was a viscous resin. Melting points varied from 50 to 500C. The acetylferrocene polymer melted at 500C and had a molecular weight of 2405; its yield was 38%. Solutions of all the polymers formed strong films with high adhesion to metal, wood, or porcelain substrates. Orig. art. has: 2 tables, 1 figure, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00

ATD PRESS: 3109

ENCL: 00

SUB CODE: MT

NO REF SOV: 002

OTHER: 003

Card 3/3

MIT'KEVICH, G.P., inzh.; SMIRNOV, A.P., inzh.

Device for determining the speed of a constricted fall of
gravel by using phosphorous and photomultipliers. Sbor. trud.
VNIINerud no.4:125-127 '65. (MIRA 18:11)

1. Kuybyshevskiy politekhnicheskii institut.

L 1568-66 EWT(1)/EWT(m)/EWP(w)/EWP(i)/T/EWP(t)/EWP(b) IJP(c) GG/JD
 UR/0056/65/049/001/0117/0123
 ACCESSION NR: AP5019223
 AUTHOR: Smirnov, A. P.; Totubalin, V. N.; Parshina, I. S.
 TITLE: Change in the resistance of tin films upon destruction of their supercon-
 ductivity by a current
 SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965,
 117-123
 TOPIC TAGS: superconductivity, tin, metal film, critical point
 ABSTRACT: This is a continuation of earlier work by some of the authors (Smirnov, Totubalin, with A. M. Kolchin et al, ZhETF v. 40, 1543, 1961) on a number of phenomena accompanying the destruction of superconductivity of tin films by current pulses of various waveforms and durations. The present paper contains more detailed results of an investigation of the change in the resistance of tin films induced by square current pulses of 0.4 μ sec duration and 0.05 μ sec rise time, carried out at 1.7--4.2K. The sample preparation was described elsewhere (A. D. Gri- gor'yev et al., PTE no. 8, 133, 1962). The current pulses were produced by a GI-4M generator. The measurements were made with a two-beam oscilloscope which recorded simultaneously the current through the sample and the voltage across it. In all samples the resistance at a fixed bath temperature (below critical) was zero

Card 1/2

L 1568-66

ACCESSION NR: AP5019223

3

below a certain value of current. For larger currents the sample resistance rose slowly during the action of the current pulse. Starting with some pulse-current amplitude, the resistance rose only during the current rise in the pulse. The results confirmed the previously noted step-like nature of the current dependence of the resistance. In all samples, the resistance R_{sn} restored by the current was less than the resistance R_n of the film in the normal state. The film resistance passed through a maximum before reaching the value R_{sn} . The critical current for the destruction of superconductivity is discussed, and it is shown that its temperature dependence depends on how the current itself is defined, but is best approximated by a parabolic curve down to 2.9K. It is also shown that the destruction of superconductivity is sensitive to the heat released by the current. Orig. art. has: 3 figures and 1 formula.

ASSOCIATION: Fiziko-tehnicheskii institut im. A. F. Ioffe Akademii nauk SSSR
(Physicotechnical Institute, Academy of Sciences, SSSR)

SUBMITTED: 18Feb65

ENCL: 00

SUB CODE: SS, EM

NR REF SOV: 003

OTHER: 014

Card 2/2

L 9866-66 EWT(1)/EWA(h)

ACC NR: AP6001579

SOURCE CODE: UR/0120/65/000/006/0126/0127

AUTHOR: Smirnov, A. P.; Totubalin, V. N.

ORG: Physicotechnical institute AN SSSR, Leningrad (Fiziko-tekhnicheskii institut AN SSSR)

TITLE: High-sensitivity cathode-ray curve tracer with brightness modulation

SOURCE: Priory i tekhnika eksperimenta, no. 6, 1965, 126-127

TOPIC TAGS: oscilloscope, cathode ray tube 25

ABSTRACT: A cathode-ray curve tracer is described which is designed for observing weak signals in the presence of periodic noise by the method of synchronous modulation both of brightness and noise. A block diagram of the tracer is shown in the figure. The current from audio-frequency oscillator 1 passes through a sample connected in series with standard resistance R_s . The voltage across the sample and the standard resistor, after amplification through amplifiers 2 and 3, is passed to oscilloscopes 6 and 7, which are coupled so that the vertical deflection amplifier of the first acts as the horizontal deflection amplifier of the second. Polarized relay 4, which can short-circuit voltage and current channels alternately, is used to produce images of coordinate axes on the oscilloscope. When current pulses — first of one, then of the other, direction — are passed, the corresponding coordinate axes

Card 1/2

UDC: 621.317:351

L 9866-66

ACC NR: AP6001579

are generated on the oscilloscope. In the interval, the volt-ampere characteristic of the sample is produced. Generator 8, which produces positive pulses with a 100-v

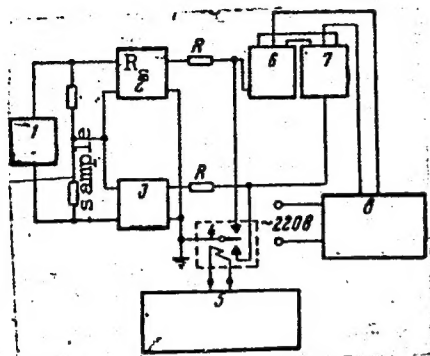


Fig. 1. Cathode-ray curve tracer

1 - Audio-frequency oscillator; 2 - amplifier; 3 - amplifier; 4 - polarized relay; 5 - relaxation generator; 6 - oscilloscope; 7 - oscilloscope; 8 - brightness modulator.

maximum height and a 50-usec fixed duration, serves to modulate the brightness of the oscilloscope. In addition to volt-ampere characteristics, the signal shape can also be observed in the current and voltage channels. Orig. art. has: 3 figures. [JR]

SUB CODE: 09/ SUBM DATE: 23Oct64/ ATD PRESS: 4165-

Card 2/2